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# Status of the Federal-Provincial Government Response to the West Coast Offshore Exploration Environmental Assessment Panel Report

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Status of the Federal-Provincial Government  
Response to the West Coast Offshore Exploration  
Environmental Assessment Panel Report


prepared  
by the

Canada Oil and Gas Lands Administration (COGLA)

and the

British Columbia Ministry of Energy, Mines and Petroleum Resources  
(BCMEMP)

September 1988



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## 1. Introduction

In September 1983, a Memorandum of Agreement signed by the Governments of Canada and British Columbia established the basis for a joint federal-provincial public review of the potential environmental and related socio-economic effects of renewed west coast offshore oil and gas exploration. Under this agreement the federal and provincial Ministers of Environment established the West Coast Offshore Exploration Environmental Assessment Panel to conduct a public review of renewed exploration in the coastal waters from the north end of Vancouver Island to the border between British Columbia and Alaska and seaward to the limit of the continental shelf.

The Panel held public meetings in many of the coastal communities throughout B.C. during 1984-85 and in April 1986 released the results of its deliberations. The Panel's report contained ninety-two recommendations to be applied when renewed exploration proceeded on the west coast.

In considering the possible renewal of offshore exploration north of Vancouver Island, the Panel made many practical and valuable recommendations and identified a number of areas where special measures would be needed to ensure effective and adequate environmental protection for the west coast. Many of these recommendations addressed the concerns which were raised by participants at the community sessions and public hearings.

In June 1987 the Honourable Marcel Masse and his colleague, the Honourable Jack Davis, released the federal-provincial response document to the West Coast Offshore Exploration Environmental Assessment Panel's report. All ninety-two of the Panel's recommendations were evaluated and the response document highlighted the government's position on each recommendation. When the federal and provincial energy ministers released the Joint Response document, they also announced that they would be entering into negotiations to establish a joint management regime for west coast offshore petroleum activities. These "Pacific Accord" negotiations are still underway. The federal and provincial moratorium on exploration will stay in place until joint management arrangements are agreed upon. Until that time, existing company rights in the offshore, issued prior to the imposition of the moratorium in 1971, will continue to be frozen. Companies will be required to re-negotiate these old rights prior to the resumption of exploration to conform to the new legislative framework for offshore petroleum licences. This briefing summarizes the status of government's follow-up to the Panel's recommendations, many which were or are now addressed in existing legislation, regulations and guidelines. Each recommendation continues to be re-evaluated in the light of changing circumstances. A list of the ninety-two recommendations and government responses are attached as appendix 2.

2. Process: Recommendations 1-4\*

The Panel made four recommendations specific to the environmental review process. These issues are now being addressed by the Federal Environmental Assessment and Review Office (FEARO) in a submission to Cabinet on Reforming Federal Environmental Assessment. Issues under consideration include, legislating the EAR Process, provision for intervenor funding, initial assessment and effective public participation in the review process.

3. Compensation: Recommendations 10, 77-79

A compensation and liability working group consisting of representation from Canada-Newfoundland Offshore Petroleum Board (CMOPB), Canada-Nova Scotia Offshore Petroleum Board (CNSOPB), the Northern Affairs Program (NAP) of the Department of Indian Affairs and Northern Development (DIAND) and COGLA has been studying the questions of:

- (i) form of financial security required under the Canada Oil and Gas Production and Conservation Act (OGPCA) and implementation legislation.
- (ii) amount of security required under Regulation 90 of the Canada Oil and Gas Drilling Regulations.

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\* The numbering corresponds to that in the federal-provincial joint response to the Panel report.

- (iii) amendments to the drilling guidelines describing the financial security requirements.
- (iv) the text of a booklet outlining the liability and compensation regime of the OGPCA and Canadian Shipping Act (CSA) from a fisherman's perspective.
- (v) the text of a slightly expanded "booklet" describing the claim's procedure under the OGPCA and implementation legislation. (The latter two initiatives may end up being one and the same)

Progress towards describing the compensation regime is being made, but it is slow due to the lack of precedence with Canadian laws and the fact that the OGPCA does not define the types of claims that are compensable in the same detail as the CSA. Uppermost for the working group is not to restrict the flexibility of the Minister/Offshore Petroleum Boards in dealing with claims.

Since June 1987, limits of liability regulations have been promulgated, setting the limit of absolute liability at \$30 million.

Item (iv), a general information booklet, should be available in the fall of 1988. Item (v) is a little more descriptive concerning "how to make a claim" and will take additional time to prepare.



4. Seismic Surveying: Recommendations 11-21

The Panel made 11 recommendations specific to seismic operations and their effects on marine organisms. No new field studies have been initiated in Canada, however, the Department of Fisheries and Oceans (DFO) has now completed a full review of the effects of explosives and airgun seismic in the marine environment. This review and recent studies initiated in the U.S. examine in detail the effects of airgun seismic as an energy source. The DFO review titled "A Guide to the Effects of Explosives in the Aquatic Environment", March 1988, will be available as a Canadian Technical Report, Fisheries and Aquatic Science Series in the near future. This review continues to be in keeping with the recent findings of studies conducted since the public hearings (full citation in references). DFO has also produced draft guidelines for the use of explosives and airguns in the marine environment. The guidelines are presently being reviewed internally within DFO and public consultation on the guidelines is expected to take place in the fall of 88.

Of particular interest are a number of U.S. studies. An assessment of the effects of airgun seismic on the eggs and larvae of the northern anchovy (Holliday et al, 1988) has recently been completed. A second study initiated in 1988, will examine the effects of airgun seismic on Dungeness crab larvae. Canada (i.e. COGLA and BCMEMPR) has contributed \$10K to this very extensive study.



The northern anchovy study results show that impacts from airgun seismic would not appear at the population level of pelagic fish species. However, the study points out that yolk sac larvae are the most sensitive life stage. The study results demonstrate the continued environmental acceptability of air guns as a seismic energy source. The study concludes by noting that any noticable impact on eggs and larvae would only result from large numbers of multiple exposures to full seismic arrays - a practise not common nor practical in a standard offshore seismic program.

5. Routine Exploratory Drilling and Support Operations:

Recommendations 22-40

Recommendations 22, 23.

5.1 Physical Oceanography and Weather Forecasting

The Department of Fisheries and Oceans is presently funded through the federal Program for Energy Research and Development (PERD) 6.7 Environmental Committee to detailing surface currents in the Queen Charlotte Sound - Hecate Strait area. The multi-year program will cost approximately \$1.25M. Data collection and analysis will be ongoing until program completion which is scheduled for 1992. An interdepartmental proposal is expected to be submitted to the PERD 6.2 Marine Engineering Committee in summer 88 to begin a major wave hindcast of the same area. This multi-year study will

cost approximately \$800K with 1993 as a target completion date. Also, the Institute of Ocean Sciences (IOS) and the Atmospheric Environment Service (AES) have just completed a study of the operational application of spectral wave models for wave forecasting on the west coast.

During the past few years, AES has undertaken a number of significant initiatives to improve capability for weather data gathering and weather forecasting on the West Coast. For example, additional trans-Pacific ships have been recruited to provide surface observations and to carry out the Automated Shipboard Aerological Program; a satellite weather data receiving station has been installed at the Pacific Weather Centre; automatic weather reporting stations have been placed at key localities along the coast; a special line of five anchored weather buoys has been deployed about 300 miles offshore and supplemented by a number of drifting buoys; and local fishermen have been recruited and trained to provide supplementary offshore weather information. To enhance weather forecasting capability, AES has also dedicated special personnel and resources. Examples include establishing for training and staffing of special marine meteorologist positions to provide 24 hour marine weather forecast service; developing and testing operational techniques for the provision of wave height forecasts; and installing an ensemble of the most up-to-date computer weather workstations to optimize data assimilation and analysis techniques.

Considerable research and development to investigate the evolution and the techniques for predicting rapidly developing west coast storms has been undertaken and workshops on these storm types were conducted in 1985 and 1987. This work has resulted in a number of changes in forecast techniques. For example, improved procedures for the recognition of the potential for storm development from satellite data have been implemented at the Pacific Weather Centre.

5.2 Site Surveys and Drilling: Recommendations 24-25

The Panel made several recommendations specific to requirements for pre-well site surveys. These concerns have since been addressed and now form part of the soon to be gazetted "Regulations Respecting the Exploration for Oil and Gas by Geophysical Operations" produced under the OGPCA.

5.3 Drilling Fluids Lubricants Task Force: Recommendations 28-29

The task force which was identified in the response to recommendation 28 and 29, has completed its review of the world-wide use, engineering aspects and environmental consequences related to the use of spotting fluids and lubricants. The task force report is in preparation and will be available in the fall of 1988. The task force's deliberations will provide a basis for decision-making related to the use of spotting fluids downhole and of other hydrocarbon-based lubricants in drilling muds.

5.4 Waste Discharge Guidelines: Recommendation 27

Guidelines specific to the use and disposal of drilling discharges for offshore drilling structures are being consolidated into the "Guidelines for the Treatment and Disposal of Wastes from Hydrocarbon Exploration and Production Installations on Canadian Offshore Frontier Lands". These guidelines are nearing completion and will be available in the fall of 88.

The guidelines are intended to provide operators with technical guidance to assist them with their requirements to comply with applicable federal, provincial and territorial Acts and Regulations specific to the treatment and disposal of wastes from offshore activities.

5.5 Environmental Code of Practice for Treatment and Disposal of Waste Discharges from Offshore Oil and Gas Operations

The "Code" presents Environment Canada's assessment of the level of waste treatment achievable at offshore oil and gas operations utilizing best practical technology. It is designed to provide an information base for Environment Canada staff, COGLA and others interested in waste treatment at offshore oil and gas facilities as well as a guide to the industry and regulatory agencies designing and approving waste treatment facilities.

The source, characteristics and treatment options available for each of fifteen potential waste streams is discussed. Recommendations are made on the discharge concentrations and volumes achievable with the application of best practical technology. Potential design opportunities for new platforms are identified for specific waste streams. The management and control of chemical usage at offshore sites is discussed with a view to establishing a "Chemical Notification Scheme" for Canada.

The rationale for compliance monitoring is also discussed and recommendations made to guide industry and government on the parameters to be sampled and the frequency of sampling. The "Code" presently in draft is undergoing departmental review and is expected to be available for publication in the fall of 1988.

6. Socio-Economic Effects of Routine Operations: Recommendations 41-46

Public Consultation: Community Visits - During the fall of 1987 public information sessions were held to update a number of coastal communities on the status of government initiatives in response to the Panel recommendations. Communities visited by COGLA/BCMEMPRI included: Sandspit, Queen Charlotte City, Masset, Prince Rupert, Terrace and Kitimat. Visits to other coastal communities interested in offshore exploration are being planned for 1988.



One of the key elements of a "Pacific Accord", which is now under negotiation, will be the creation of a new regulatory authority which will manage the offshore on behalf of the federal and provincial governments. This new management body will assume much of the responsibility for ensuring appropriate public consultation with respect to the oil and gas activities that it will regulate in the offshore area.

No exploration activity will commence in the offshore until new regulatory arrangements are concluded. The existing rights held by companies in the offshore must be renegotiated into new exploration licences. These rights renegotiations with companies will crystalize industry exploration plans for the offshore, most of which is already under permit to companies.

An offshore news update is in the planning and will be available for public distribution in September 88. The newsletter highlights activities to-date and provides insight into future initiatives and the status of the governments' response to the Panel's recommendations.

7. Hydrocarbon Blowouts: Recommendations 47-51

The oil and gas industry and government continue to pursue research in areas specific to relief well capability and the development of technology to ensure the safety of rig personnel (see section 7.2).

In this regard, COGLA is presently drafting and amending several bodies of regulations which will address many of the concerns identified by the Panel. These regulations include:

- 1) Oil and Gas Certificate of Fitness Regulations/OGPCA/237-EMR/586-INAC (Pre-drafting stage)
- 2) Operations Regulations/OGPCA/231-EMR/583-INAC (Publication stage)
- 3) Drilling Regulations (Amendments), OGPCA/229-EMR/582-INAC (Pre-publication stage).

7.1 Geopressure Drilling Task Force: Recommendations 48-50

The Geopressure Drilling Task Force (GDTF) reported on its major areas of investigation, including pressure prediction, pressure detection, tubular design, and well-control equipment and procedures. The report recommended practices to promote safety among operators drilling in geopressured formations. The task force, a joint COGLA-industry effort, was formed in 1986 to respond to the concerns in the COGLA-commissioned report, "An Examination of Safety Procedures and Practices Used in Exploratory Drilling Operations Conducted in Abnormally Pressured Formations in the Scotian Shelf Area". The GDTF report will be recommended to all operators drilling in offshore areas including the west coast.

7.2 Canada Oil and Gas Occupational Safety and Health

Regulations: Recommendation 5

To enhance the safety of every offshore work site, COGLA collaborated with Labour Canada to develop the above regulations, which were promulgated at the end of October 1987 under Part IV of the Canada Labour Code. COGLA is now responsible for applying Part IV of the code to personnel employed in the exploration, production, processing, conservation or transportation of oil and gas on frontier lands. The new regulations set out specific minimum standards for the work site including lighting, noise levels, material-handling equipment, sanitation and drinking water quality.

These regulations should assist operators in conducting safe drilling operations in the west coast offshore.

7.3 Inspections: Recommendation 51

In 1987, under a Memorandum of Understanding between COGLA and Labour Canada, COGLA inspectors were appointed safety officers. This will ensure that Part IV of the Canada Labour Code will be enforced and the monitoring of safety and health of all offshore workers conducted to the highest standards.

8. Fate and Effects of Oil in the Marine Environment: Recommendations

52-58

Initiatives are presently underway to address several of the issues raised by the Panel in this area.

Research needs specific to the effects of oil on salmonids have been identified by DFO for funding under A-Base and the federal Program for Energy, Research and Development. Similarly, oil spill-salmon models developed in Alaska are being evaluated and baseline information on seabirds is being systematically collected by the Canadian Wildlife Service (see section 8.7).

8.1 Evaluation of Continental Shelf Habitats

An important objective of DFO's Fish Habitat Management Policy is to conduct research supporting the conservation, restoration and development of fish habitats. This includes understanding the factors controlling the productive capacity of natural habitats. An effective way of doing this is to construct ecosystem simulation models. Over the past five years, scientists of the Habitat Ecology Division, Bedford Institute of Oceanography (BIO), in collaboration with many others, have developed ecosystem simulation models of two important Canadian habitats potentially threatened by environmental disturbance: Cumberland Basin in the Bay of Fundy (tidal power

development) and the Grand Banks (hydrocarbon extraction). These models have provided insight into factors controlling production and can be used to investigate the likely impacts of different development scenarios.

Further ecosystem modelling work within the Habitat Ecology Division is now focussing on the development of a general (i.e. not site specific) continental shelf model. In particular, attention is being placed on improving the representation of the benthic ecosystem (worms, clams, starfish, etc.) and the important energy exchanges between it and the pelagic ecosystem (e.g. plankton, fish, etc.). This work is being conducted through a series of multidisciplinary workshops which were held at BIO during the winter and spring of 1988. The model will be tested using data from specific continental shelf regions. Ultimately, it will have several applications. On very short notice, the model could be used to explore the general type of habitat changes that could take place as the result of specific environmental disruptions. It could also be used as a building block for the construction of a multi-compartment model of an important continental shelf habitat such as occurs on Canada's west coast. Finally, it can also be used to identify important data gaps and to plan the direction of future research on habitat productivity.



## 8.2 Literature Evaluation

COGLA is presently conducting an extensive literature review and evaluation of the effects of hydrocarbons on west coast salmonids. The review is designed to assess the state of knowledge on effects, the effectiveness of oil spill-salmon impact models and to identify future research needs. The review will be completed in October 1988.

## 8.3 Global Bibliography

The Department of Fisheries and Oceans has completed a literature review and global bibliography of research on fate and effects of oil in fresh and salt water fish. The bibliography contains over 1,512 citations. This publication is a significant deliverable, placing all literature relevant to oil and gas related activities into a computer data base. The review paper also provides insight into known effects and provides insight into future research needs particularly for many of Canada's commercial marine fish species.

#### 8.4 Oil Spill Models

Work continues in the area of oil spill modelling and evaluations. Oil spill models designed to evaluate the impacts on a salmon population continue to be developed by researchers in Alaska. The value of these models to a west coast B.C. scenario are presently being evaluated.

#### 8.5 Program for Energy Research and Development (PERD)

A number of studies are presently being undertaken by government through PERD to evaluate the effects of pollutants on a variety of marine species. Many of these studies are directed to issues raised by the Panel concerning the fate and effects of hydrocarbons on marine species. This research includes but is not limited to:

- 1) an evaluation of mixed function oxidases (MFO) as a tool to monitor hydrocarbon exposure in fish and invertebrates
- 2) an evaluation of oil degradation rates in sand beach environments through the application of nutrients
- 3) an assessment of the potential for uptake of hydrocarbons and tainting of commercially important fish species
- 4) an evaluation of the sub-lethal effects of OBM cuttings with a range of aromatic hydrocarbon content on hepatic MFO induction in fish

- 5) an evaluation of hydrocarbon residue concentrations in samples from fish and shellfish experimentally exposed to OBM cuttings
- 6) an evaluation of hydrocarbon stress on juvenile fish
- 7) an evaluation of the toxicity potential for fish larvae of sediments contaminated with drilling mud base oil
- 8) an evaluation of the effects of drilling muds and cuttings on the swimming behaviour, growth and reproductive potential of the sea scallop, and
- 9) an evaluation of the sub-lethal and tainting effects of oil-based drilling mud cuttings on scallops.

In addition, DFO is presently conducting an internal review of past and present hydrocarbon research and monitoring programs. A second phase of this exercise, which should be completed in the fall of 88, will identify present and future priorities as well as the development of programs and strategies.

A recent conference/workshop sponsored by the U.S. Department of the Interior in Oregon, has summerized the available information on environmental processes in northwestern U.S. waters. Priority subject areas, many of which are of interest to Canada's west coast are being evaluated by the Offshore Hydrocarbon Technical Working Group (see section 10.2).

8.6 Seabird Resource Evaluation: Recommendation 33

The Canadian Wildlife Service (CWS) has completed its systematic inventories of seabird colonies in the Queen Charlotte Islands and the north mainland coast around Prince Rupert. This year an inventory for the central mainland coast is expected to be completed. This fall CWS will test a new methodology for surveying pelagic populations for potential use in future offshore seabird surveys.

9. Oil Blowout Contingency Planning and Countermeasures:

Recommendations 59-76

The Panel made a number of recommendations which covered the broad spectrum of issues in this area. Government continues to address many of these recommendations on an ongoing basis through departmental programs. Many of the Panel's recommendations are dealt with by existing legislation, regulations and guidelines.

Nevertheless, advances have been made to ensure that issues specific to oil blowouts are addressed, that contingency planning is current and that strategies reflect the present state-of-the-art for countermeasures.

## 9.1 Research and Development

A number of research studies have been initiated through PERD and the Environmental Studies Research Funds (ESRF) to address issues specific to improving countermeasures strategies in the event of an oil blowout, assessing the fate of dispersed oil, oil spill clean up, and spill monitoring. This research includes but is not limited to:

(PERD)

- 1) studies to refine in-situ field systems which can be used in the development and evaluation of methods for oil spill clean-up
- 2) the development of a practical and safe system of detection and control of undesirable microbial contamination of drilling muds
- 3) an evaluation of surface currents in the Queen Charlotte Sound - Hecate Strait area (see description under section 5.1)
- 4) an evaluation of the biodegradation of oils in quiet coastal environments
- 5) an evaluation of the effectiveness/interaction of oil/dispersants in high suspended particulate water



- 6) an evaluation of the long term weathering of oil spill tars
- Environmental Studies Research Fund (ESRF) 7) an evaluation of wave climate on the northern coast of British Columbia
- 8) an evaluation of drop size and dispersant effectiveness: small-scale laboratory testing
- 9) the development of a Canadian oil-spill countermeasures training program

Twelve additional studies addressing a variety of topics specific to oil spill research and countermeasures were completed in 1987 through the ESRF program (see references page 24).

9.2 Oil Spill Monitoring Guidelines: Recommendations 68-70, 72-76

Draft guidelines have been formalized by COGLA and will be reviewed with industry and other government departments in the fall of 1988. The objectives of the guidelines are threefold 1) to facilitate timely and coordinated implementation of scientifically credible oil spill fate and effects monitoring programs, 2) to facilitate the rapid assessment of the effectiveness of oil spill countermeasures effectiveness, and 3) to promote effective meshing of industry and government-sponsored spill monitoring and related research programs.

10. Managing for Environmental Protection: Recommendations 88-92

10.1 Pacific Offshore Petroleum Exploration Environmental  
Co-ordinating Committee (ECC)

The Environmental Co-ordinating Committee held its first meeting on January 12, 1988. The committee was established by the two governments in response to Panel recommendation number 90. The committee represents a number of federal and provincial departments and agencies and is co-chaired by the federal and provincial environment departments.

The terms of reference for the Committee are attached as Appendix 1.

10.2 Offshore Hydrocarbon Technical Working Group

A technical working group was established by the Environmental Co-ordinating Committee (ECC) in 1987 to assist it in fulfilling its function. The Working Group has met on several occasions and held a workshop to prioritize environmental research needs specific to the Panel's recommendations. The objective of the workshop was to develop an action plan to address those Panel recommendations that were accepted or accepted in intent by agencies of both governments. An "action plan" is to be forwarded to the Environmental Co-ordinating Committee in early September 1988. A

representative from the Islands Protection Society, the Commercial Fishing Industry Council and the Offshore Alliance of Aboriginal Nations attended the workshop which was held in Vancouver July 25 & 26, 1988.

### 10.3 Public Consultation

The Panel recommended the establishment of a public advisory committee on environmental concerns which would include local, native and fishing interests. The concept of a mechanism for public consultation has been accepted. The most appropriate processes and mechanisms for public consultation will depend on the structure of the new offshore joint management regime which is now being negotiated and also on the level and location of exploration activity which can be expected when it is allowed to resume.

## REFERENCES

### Seismic

1. Wright, D. 1988. A Guide to the Effects of Explosives in the Aquatic Environment: Including a Position Statement and Guidelines for the Use of Explosives in Canadian Waters. Can. Tech. Rep. Fish. Aquat. Sei. (Draft). Central and Arctic Region. Winnipeg.
2. Holliday, D.V., Clarke, M.E., Pieper, R.E., and Greenlaw, C.F. 1987. The Effects of Airgun Energy Releases on the Eggs, Larvae, and Adults of the Northern Anchovy (*Engraulis mordax*). Tracor Project No. 034022. The American Petroleum Institute, Washington, D.C. 108 pp.

### Environmental Studies Research Funds Reports (Since April 1986)

REPORT #	TITLE	AUTHOR
<u>1. MARINE ENVIRONMENTAL EFFECTS AND MONITORING</u>		
060	Dispersion and Fate of Oil from Oil-based Drilling Muds near Sable Island, N.S. January 1987. 169 p.	Dobrocky Seatech Ltd.
080	Tainting of Finfish by Petroleum Hydrocarbons. September 1987. 150 p.	Martec Limited
<u>2. OIL SPILL RESEARCH AND COUNTERMEASURES</u>		
031	Stranded Oil in Coastal Sediments: Permeation in Tidal Flats. April 1986. 23 p.	Dobrocky Seatech Ltd.
033	Practical Insights into Decision-making for Shoreline Cleanup of Oilspills. May 1986. 44 p.	Dobrocky Seatech Ltd.
034	Development of a High Pressure Water Mixing Concept for Use with Ship-based Dispersant Application. May 1986. 51 p.	S.L. Ross Environmental Research Ltd.

REPORT #	TITLE	AUTHOR
2. <u>OIL SPILL RESEARCH AND COUNTERMEASURES</u> (Cont'd)		
051	Decision-making Aids for Igniting or Extinguishing Well Blowouts to Minimize Environmental Impacts. November 1986. 119 p.	S.L. Ross Environmental Research Ltd.
058	Countermeasures for Dealing with Spills of Viscous, Waxy Crude Oils. October 1986. 59 p.	S.L. Ross Environmental Research Ltd.
068	Mid-Scale Testing of Dispersant Effectiveness. April 1987. 82 p.	S.L. Ross Environmental Research Ltd.
069	Spills-of-Opportunity Research February 1987. 124 p.	Hatfield Consultants Ltd.
070	The Use of Chemical Dispersants in Salt Marshes. May 1987. 100 p.	P. Lane and Associates
072	Acoustical Methods for Measuring Thickness of Oil on Water. April 1987. 57 p.	Arctec Canada Limited
074	Removal of Stranded Oil from Remote Beaches by In-Situ Combustion. March 1987. 122 p.	Bennett Environmental Consultants Ltd.
078	Measurement of Oil Thickness on Water from Aircraft: A. Active Microwave Spectroscopy B. Electromagnetic Thermoelastic Emission. August 1987. 82p	Canpolar Inc.
079	The Development of a Canadian Oil-Spill Countermeasures Training Program. May 1987. 194 p.	S.L. Ross Environmental Research Ltd.
082	Drop Size and Dispersant Effectiveness: Small-Scale Laboratory Testing. July 1987. 31 p.	S.L. Ross Environmental Research Ltd.



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REPORT #	TITLE	AUTHOR
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2. <u>OIL SPILL RESEARCH AND COUNTERMEASURES</u> (Cont'd)		
083	Microbial Degradation of Hydrocarbon Mixtures in a Marine Sediment Under Different Temperature Regimes. September 1987. 48 p.	Nova Scotia Research Foundation Corp.
086	Prototype, Mesoscale Simulator for the Study of Oil Weathering Under Severe Conditions. November 1987. 55 p.	Institut National de la Recherche Scientifique
3. <u>WAVES</u>		
059	Wave Climate Study - Northern Coast of British Columbia. May 1987. 93 p.	Dobrocky Seatech Ltd.
4. <u>BOTTOM SEDIMENTS</u>		
017	Scour around Seafloor Structures. April 1986. 225 p.	Keith Philpott Consulting Ltd.
027	Sediment Transport - Present Knowledge and Industry Needs. April 1986. 394 p.	Seaconsult Marine Research Ltd.

## APPENDIX 1

### Terms of Reference

Pacific Offshore Petroleum Exploration

Environmental Co-ordinating Committee



TERMS OF REFERENCE  
PACIFIC OFFSHORE PETROLEUM EXPLORATION  
ENVIRONMENTAL COORDINATING COMMITTEE

INTRODUCTION

Subsequent to the agreement by the Minister of Energy, Mines and Resources for Canada and the Minister of Energy, Mines and Petroleum Resources for British Columbia to endorse the joint federal-provincial response to the Offshore Exploration Assessment Panel in relation to anticipated petroleum exploration, an exchange of letters between the Ministers and their respective Cabinet colleagues established an Environmental Coordinating Committee.

PURPOSE

The Pacific Offshore Petroleum Exploration Environmental Coordinating Committee generally shall be responsible for advising the petroleum regulators (B.C. M.E.M.P.R. and C.O.G.L.A.) with respect to the environmental and related socio-economic aspects of the planning and implementation of offshore petroleum exploration on the West Coast. The Committee specifically shall be responsible for coordinating and monitoring the implementation of the recommendations of the Panel as per the joint response and as directed by the responsible Ministers.

1. FUNCTIONS

The Committee shall:

- (a) guide and monitor the implementation of the Panel recommendations endorsed by federal and provincial government departments as outlined in the document "Responses and Comments on the report of the West Coast Offshore Environmental Assessment Panel";

- (b) recommend ways and means of implementing those Panel recommendations which were supported in intent in the above report;
- (c) guide and oversee the activities of technical working groups formed by the committee;
- (d) provide a forum for airing and resolving concerns arising among agencies;
- (e) report at least annually to the federal and provincial Ministers of Energy and Environment.

## 2. ACTIVITIES

Committee activities shall include, but not be limited to:

- (a) identifying current and anticipated concerns arising between offshore oil and gas activities and other resource users;
- (b) advising the petroleum regulator(s) on these concerns, including recommendations on how the concerns could be mitigated or resolved;
- (c) providing a forum for exchange of information on environmental issues among the agencies represented on the Committee;
- (d) identifying general environmental information and management needs related to West Coast Offshore oil and gas activities;
- (e) providing general advice on management of social issues related to oil and gas activities;
- (f) reviewing the regulator's annual reports on the progress of exploration programs and related environmental monitoring and studies carried out by the regulator, industry and others.



### 3. MEMBERSHIP

(a) The Committee shall consist of one representative from each of the following agencies and organizations:

- B.C.    - Ministry of Environment and Parks
- Ministry of Energy, Mines and Petroleum Resources
- Ministry of Agriculture and Fisheries
- Native Affairs Secretariat
- Ministry of Tourism, Recreation and Culture

- Canada - Environment Canada
- Department of Fisheries and Oceans
- Canadian Oil and Gas Lands Administration
- Indian and Northern Affairs Canada
- Canadian Coast Guard

(b) The Committee will be co-chaired by the representatives of B.C. Ministry of Environment and Parks and Environment Canada.



## APPENDIX 2

West Coast Exploration Environmental  
Assessment Panel Recommendations and  
Joint Government Responses



## APPENDIX

### DETAILED RESPONSE

This detailed consolidated response to the recommendations of the report has been prepared in consultation with appropriate federal and provincial departments. The majority of the recommendations of the report have been accepted. Other recommendations have been accepted in intent. In such circumstances the objective of the recommendation is understood and accepted but the specific method of implementation may require modification or the agency responsible for its implementation has not yet been determined. A few recommendations have been rejected for the reasons indicated in each case. Finally, no response was possible in three instances where the issues are currently subject to ongoing policy review.



RECOMMENDATION:

- (1) The Panel recommends that public environmental assessment reviews of broad industrial activities proposed within large geographic regions be conducted in such a manner that government, through interdepartmental coordination, be required to prepare the environmental impact statement, and to present this information in the appropriate forum for public review.

RESPONSE:

ACCEPT INTENT

COMMENT:

The need for environmental reviews and regional assessments has been the recognized practice in the past and will continue. In most cases, the preparation of the specific environmental impact statement (EIS) is and will continue to be the responsibility of the specific industry applying to carry out a project in an area.

Where there is no specific proponent for a proposed new regional project the responsibility for the preparation of an environmental impact statement may be assigned to an industry association or its like on behalf of the industry in question.

PROCESS

RECOMMENDATION:

- (2) The Panel recommends that a specific proponent not be designated for environmental assessment reviews unless the regulatory agencies have the capacity to enforce the proponent's continued participation.

RESPONSE:

UNDER POLICY REVIEW

COMMENT:

None at this time

RECOMMENDATION:

- (3) The Governments of Canada and British Columbia develop policies on intervenor funding for formal public reviews that will enable funds to be made available to communities and organizations to participate effectively in public review processes and
- (4) financial assistance be directed to communities and groups to help them analyze and understand existing information, to develop and articulate positions and concerns, and to organize and present their own briefs..

RESPONSE:

UNDER POLICY REVIEW

COMMENT:

The provision of intervenor funding in some circumstances may be beneficial to the public review process. However, decisions on intervenor funding must be consistent with government policy.

## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (5) The Panel recommends that the regulatory authority ensure, as a paramount priority, a) a high level of training, experience and competence for drilling personnel and the highest standard of equipment; also that frequent inspection of systems, equipment, and personnel are carried out, and b) that a satisfactory level of weather forecasting is available to drilling operations.

### RESPONSE:

ACCEPT

### COMMENT:

- a) The recommendation regarding the need for the highest standards related to manpower competence, equipment and safety measures is accepted. These goals are consistent with management principles related to petroleum operations in Canada. Safety standards are directly dependent on highly competent workers and efficient equipment and safe practices. These standards in turn provide protection from life-threatening situations and environmental damage. Standards are constantly being revised to reflect state-of-the-art requirements in technology and environmental protection.
- b) A satisfactory level of forecasting capability will be ensured by the petroleum regulator as part of the drilling program approval process.

## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (6) The Panel recommends that drilling be prohibited within an exclusion zone of 20 km from any point of land for the protection of important marine life in the event of an offshore oil blowout.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

The establishment of a 20 km exclusion zone to provide protection to marine, nearshore and coastal resources is accepted. Such an exclusion zone will not only provide for a suitable spill response capability, but will also minimize any potential disturbance associated with routine drilling and supply operations. No revision to the recommended 20 km zone is intended during the initial stages of the exploratory drilling program. Following these stages, site specific reductions to the zone would be considered only if there is a demonstrated significant need based on geological and geophysical evidence to drill a well within the zone.

In such instances, the following conditions must be met prior to drilling approval:

1. Environmental safeguards, contingency plans and oil spill response capabilities must be specifically designed and shown to be effective in ensuring the maximum protection of marine nearshore and coastal resources of the specific area.
2. Consultation with those agencies, organizations and communities (as appropriate), having an interest in the area to ensure that all environmental and other user concerns are fully addressed.

Throughout the exploration phase, as additional knowledge of the oceanography, geological and aquatic resources is gained, the need for special requirements for the protection of fisheries and other aquatic resources will be evaluated.



## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (8) The Panel recommends that a mechanism be established to ensure participation of the public of the region, in ways acceptable to them, in the management and decision-making related to offshore hydrocarbon exploration.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

The intent of a mechanism for public involvement to ensure full communication with the affected public is accepted. The petroleum regulator is, however, the accountable authority with legislated responsibility for management and decision making related to offshore hydrocarbon exploration. The petroleum regulator will develop the appropriate mechanisms, in consultation with the government agencies, the industry and the public to ensure full communication with the affected public.

## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (7) The Panel recommends that exploratory drilling operations outside the 20 km exclusion zone be initially confined to the months of June to October inclusive to ensure weather more favourable to drilling operations, to mitigate the likelihood of an oil blowout and to protect important biological species during critical phases of their life cycles.

### RESPONSE:

ACCEPT INTENT

### COMMENTS:

The initial drilling program will be designed to encourage the advanced positioning of the rig so that drilling itself may proceed as early as possible in June. After the summer season frequency and severity of storms increases significantly in the month of October. The proposed drilling window will be reviewed by the petroleum regulator to ensure that it meets environmental protection and rig safety goals. Extension beyond September for the initial program will require careful consideration and review by the petroleum regulator in cooperation with other agencies, of all environmental parameters and drilling unit capabilities to ensure maximum and acceptable environmental protection and rig safety.

## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (9) The Panel recommends that in designing programs and mechanisms for the involvement of the public for the region in the management and decision-making relating to offshore hydrocarbon exploration and its impact on marine resources, government develop means to ensure aboriginal peoples are involved.

### RESPONSE:

ACCEPT

### COMMENT:

Further to comments on Recommendation #8, aboriginal peoples will receive appropriate opportunities for providing advice on matters affecting them. The most effective means through which consultation might take place will be developed by government and industry in cooperation with native communities and organizations.

## ISSUES AND KEY RECOMMENDATIONS

### RECOMMENDATION:

- (10) The Panel recommends that a government compensation policy covering all stages in an exploration program be established before exploration activity begins.

### RESPONSE:

ACCEPT

### COMMENT:

See comments specific to compensation #s 77-89.

## SEISMIC SURVEYING

### RECOMMENDATION:

(11) The Panel recommends that:

A seismic survey program such as that proposed by Chevron be permitted to proceed, providing that half the program is conducted in the first year of operation and the remainder in the second year;

### RESPONSE:

REJECT

### COMMENT:

No significant long term effects are anticipated from routine airgun seismic exploration in the proposed exploration area. Therefore, the need for dividing the seismic survey into a two year program is not supported unless it is desirable from the point of view of the operator.

RECOMMENDATION:

- (12)           The program be conducted with no less than a 3 km line spacing pattern, and a maximum survey length of 5,200 km;

RESPONSE:

REJECT

COMMENT

Specific spacing patterns and survey lengths will be determined by the petroleum regulator in consultation with the operator. Seismic program approval will be considered following application by an operator and review and consultation with other resource agencies.



## SEISMIC SURVEYING

### RECOMMENDATION:

- (13) During both seasons of seismic surveying, the Department of Fisheries and Oceans carry out extensive monitoring and experimentation in conjunction with the seismic survey vessel to determine the nature and extent of any resulting damage;
- (14) Such data collection and experimentation be used by the regulatory authority to determine the likely long-term effects of seismic operations on marine biota, particularly eggs and larvae, and be applied in determining the appropriate controls and regulations to any future seismic surveys; and

### RESPONSE:

ACCEPT INTENT

### COMMENT:

No significant long term effects on fish eggs and larvae are anticipated from routine geophysical operations. However, in response to public concerns, evaluation of ongoing studies of the potential effects of airgun seismic activity will be undertaken by the petroleum regulator in consultation with other government agencies.

RECOMMENDATION:

- (15)           Until such time as the results of monitoring and experimentation have been evaluated, no other marine seismic survey operations be permitted.

RESPONSE:

REJECT

COMMENT:

Environmental scientists regard significant or long term effects of airgun seismic operations on marine biota unlikely. To date there is no evidence to support the need for this restriction. Should future field and/or laboratory studies prove the contrary, this recommendation will be reconsidered by the petroleum regulator in consultation with other government agencies.

## SEISMIC SURVEYING

### RECOMMENDATION:

- (16) The Panel recommends that during the sensitive grey whale migration and herring spawning periods of March, April, May, November and December, seismic operations not occur within 10 km of shore.
- (17) The Panel recommends that when marine mammals are observed within 2 km of the airgun array, the survey temporarily cease until the mammals have moved out of the area.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

These recommendations will be accommodated in the regulatory review and approval process. Seasonal restrictions will be identified during the regulatory review of site-specific seismic programs to ensure maximum protection of migrating grey whales, other marine mammals and spawning herring to avoid and otherwise minimize potential conflicts with commercial fishing vessels.

The Department of Fisheries and Oceans considers the 2 km distance criterion for marine mammal sightings arbitrary and suggests that it be more subjective (eg. "in the vicinity") and designated as a guideline only. Seismic operations may not have to be curtailed if marine mammals which have been sighted at distance do not approach.

RECOMMENDATION:

- (18) The Panel recommends that, for purposes of general operations, seismic surveying be restricted to airguns only.
- (19) The Panel recommends that where the use of explosives in shallow water seismic surveys is required to connect land and sea surveys, approval only be granted where:
- there are no alternatives,
- explosives are buried within boreholes within the seafloor; and
- the program is subjected to specific approval from the Department of Fisheries and Oceans as to timing and location.

RESPONSE:

ACCEPT

COMMENT:

Any deviation from the use of airgun seismic or other non-chemical explosives would be made only under acceptable conditions and in full consultation with the Department of Fisheries and Oceans and other government agencies. The Department of Fisheries and Oceans is currently developing national guidelines on the use of explosives in marine waters.

## SEISMIC SURVEYING

### RECOMMENDATION:

- (20) The Panel recommends that booklets be produced and widely distributed describing the fishing techniques employed on the British Columbia coast, illustrating the different methods and seasons used to catch fish and shellfish, and describing seismic survey operations.

### RESPONSE:

ACCEPT

### COMMENT:

The preparation of these booklets will be initiated by the petroleum regulator in cooperation with other government agencies, industry and the public.

## SEISMIC SURVEYING

### RECOMMENDATION:

- (21) The Panel recommends that the operators of the seismic vessels meet with the members of the fishing industry before surveying begins to identify potential heavy fishing areas and seasons to familiarize themselves with the local fishing equipment and techniques.

### RESPONSE:

ACCEPT

### COMMENT:

This recommendation describes the types of topics that the geophysical operator would be expected to pursue in public consultation either on land or in other offshore jurisdictions in Canada. Such consultation would be assured by the petroleum operator at the request of the petroleum regulator in consultation with the Department of Fisheries and Oceans and the Ministry of Agriculture and Fisheries as required.



ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (22) The Panel recommends that regulatory authority not give approval to drill until the Atmospheric Environment Service of Environment Canada is satisfied that the capability exists to provide a minimum of 6 hours advance warning of severe storms to enable an offshore drilling operator sufficient time to safely and efficiently disconnect from the wellhead.

RESPONSE:

ACCEPT INTENT

COMMENT:

Existing guidelines already address the intent of the Panel's recommendations. Due to rapidly developing severe storms on the West Coast the petroleum regulator, with the Atmospheric Environment Service acting in an advisory capacity, will ensure that requirements are in place for an adequate advance warning system for severe storms for offshore drilling operations.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (23) The Panel recommends that the Department of Fisheries and Oceans develop and implement a program to improve general knowledge of current movements in the region, and in particular, in the area of a drilling location when one is proposed.

RESPONSE:

ACCEPT INTENT

COMMENT:

Studies are being initiated by the Department of Fisheries and Oceans to provide a regional description and assessment of the surface currents and their driving mechanisms in northern B.C. waters. The knowledge resulting from these programs will be needed to fully assess the significance of currents relative to the area of a drilling site in the region. The Department of Fisheries and Oceans recognizes its responsibility to improve the knowledge of currents in the region. However, site specific current movement measurements for a drilling location must be provided on a real time basis by the operator under existing regulations. That information will be taken into consideration in engineering design criteria.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (24) The Panel recommends that operators be required to undertake an extensive site survey of the seabed, including a seismic sparker survey, when investigating an area for a specific drilling location.

RESPONSE:

ACCEPT

COMMENT:

Seabed site surveys are required under current regulation and will continue to be carried out as normal practice by the operator.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (25) The Panel recommends that before drilling occurs, a proposed site must be evaluated by the operator and the regulatory authority for its potential susceptibility to earthquake-induced turbidity flows, and that if the potential exists, wellhead design will be such that the well remains safely shut-in.

RESPONSE:

ACCEPT

COMMENT:

This recommendation highlights the requirements of existing regulations and reflects present practice in offshore petroleum operations. Research is being undertaken by the Geological Survey of Canada to prepare seismicity hazard charts and maps (i.e. earthquake susceptibility) for the West Coast.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (26) The Panel recommends that only chrome-free lignosulphonate be used for drilling muds in offshore exploratory drilling operations on the west coast.
- (27) The Panel recommends that the regulatory authority require industry to use only those drilling mud products with low to zero heavy metal content, and that industry routinely sample their supplies to ensure the approved standards are maintained.

RESPONSE:

ACCEPT INTENT

COMMENT:

The need to minimize the input of heavy metals into the marine environment is accepted. Routine sampling of drilling mud products will be carried out by the petroleum regulator to ensure that approved standards for heavy metal content are not exceeded. Standards specific to the use and disposal of drilling fluids will be established in consultation with other government agencies.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (28) The Panel recommends that, to reduce the need to use oil as a spotting fluid to free stuck drill collars, spiral or straight grooved drill collars be used for all drilling operations.
- (29) The Panel recommends that if oil must be used to free collars, mineral oil or another nontoxic type of oil be used.

RESPONSE:

ACCEPT INTENT

COMMENT:

The intent of these recommendations to minimize risk to the environment is accepted. An industry-government taskforce has been struck to address the concerns related to the use of spotting fluids and lubricants in Canadian offshore drilling. The recommendations developed by the Taskforce will be studied by the petroleum regulator, and as appropriate, applied to petroleum activities, including any on the West Coast.



ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

The Panel recommends, under special circumstances requiring the use of oil-based drilling muds, that:

- (30)           only mineral oil-based muds be used;
- (31)           a closed system be used in which no oil-based drilling muds are released into the sea; and
- (32)           the amount of oil adhering to the cuttings be minimized by jet washing at the shale shaker and by collecting the oil.

RESPONSE:

ACCEPT INTENT

COMMENT:

The use of oil based muds in the Canadian offshore and the desire to minimize their potential impact on marine resources is subject to guidelines which govern the type, use and modes of discharge of these products. The discharge of mineral oil-based muds requires the use of best practical treatment technology to minimize oily discharges. In certain instances a closed system may be required. The petroleum regulator, in consultation with other agencies, will ensure that an appropriate and effective technology is employed in offshore operations to minimize environmental disruptions.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (33) The Panel recommends that, to minimize disturbance to marine mammals and birds from aircraft noise, the Canadian Wildlife Service of Environment Canada and the British Columbia Ministry of Environment develop guidelines to prevent disturbances to sensitive species, and that these guidelines be followed by aircraft operators involved in the west coast offshore exploration program.

RESPONSE:

ACCEPT INTENT

COMMENT:

The general intent of this recommendation is accepted. However, it is suggested that any policy in this regard should be of general application to air transportation and not specific to offshore petroleum exploration and that those regulations would comply with international standards. A framework within existing transportation and wildlife legislation is already in place to achieve the objectives of this recommendation. The Department of Fisheries and Oceans would play a key role in developing protective measures for marine mammals. The Canadian Wildlife Service and the British Columbia Ministry of Environment and Parks will identify vulnerable species and special areas as part of any site-specific drilling proposal to reduce the impact of routine low level flights.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (34) The Panel recommends that Transport Canada develop a mechanism to ensure that flight constraints around sensitive marine mammal and bird areas be applied to all aircraft operators in the area.

RESPONSE:

ACCEPT

COMMENT:

This recommendation is consistent with current practice which will continue to be monitored by Transport Canada and the Canadian Wildlife Service. Modifications to current practice will be discussed by the petroleum regulator with these agencies as required.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (35) Where feasible, drill rig marking lights consist of high intensity strobe or other types of intermittent lights;

RESPONSE:

ACCEPT INTENT

COMMENT:

The use of high intensity strobe lights is incompatible with international distress regulations. The possible use of other types of intermittent lights will be evaluated.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

The Panel recommends that:

- (36) Working lights be masked or shielded to minimize outward illumination; and
- (37) The attraction of birds to rig lights be monitored and reports published monthly on bird kills so that data is collected to better evaluate and mitigate potential problems.

RESPONSE:

ACCEPT INTENT

COMMENT:

The intent of recommendation 36, which is to reduce bird mortalities caused by rig lighting, is accepted. Rig marking lights and working lights are designed for the safety of those working on the rig and in the vicinity of the rig. Modifications will be made only if worker safety is not jeopardized as a result.

Regarding recommendation 37, existing regulations require the operator to keep a log of such occurrences and to report monthly to the petroleum regulator. This information will be available to the Canadian Wildlife Service and those who might wish to make use of it.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (38) The Panel recommends that during the exploration phase of offshore oil and gas activity, shorebase facilities be developed within the industrial zones of existing communities.

RESPONSE:

ACCEPT INTENT

COMMENT:

The intent of this recommendation is consistent with existing practice. In some cases it may not be possible to locate facilities in an existing industrial zone and other sites may need to be identified in consultation with local and regional governments.



ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATION

RECOMMENDATION:

- (39) The Panel recommends that where sediment removal processes are evident at a drill site, the wellhead cut off point below the seabottom be increased to three metres.

RESPONSE:

ACCEPT INTENT

COMMENT:

The intent of this recommendation, which is designed to reduce seabed hazards, is appreciated. It is suggested however that rather than an arbitrary 3 metres as the Panel recommends, in areas where the bottom sediments are mobilized by wave and tidally induced processes, appropriate steps be taken to ensure that the wellhead is cut-off far enough below the seabed that it will not become exposed. This broader approach takes into account situations where there is no net removal of sediment but considerable movement.

ROUTINE EXPLORATORY DRILLING  
AND SUPPORT OPERATIONS

RECOMMENDATION:

- (40) The Panel recommends that the Canadian Coast Guard closely monitor any increase in ship traffic and, if and when offshore drilling is approved, develop and enforce the use of a marine traffic management system in the region.

RESPONSE:

ACCEPT

COMMENT:

Improvements to the existing marine traffic system will be implemented by the Department of Transport as required to ensure the safety of all marine traffic, including offshore drilling units.

SOCIO-ECONOMIC EFFECT  
OF ROUTINE OPERATION

RECOMMENDATION:

- (41) The Panel recommends that, in the event of expanded exploration, the Department of Indian Affairs and Northern Development and the British Columbia Ministry of Municipal Affairs provide funding and other assistance to potentially affected communities so that these communities can initiate ongoing monitoring programs related to the socio-economic effects of offshore hydrocarbon exploration and initiate programs to deal with these effects.

RESPONSE:

ACCEPT INTENT

COMMENT:

The need for funding of socio-economic effects monitoring would be reviewed by industry and the appropriate government agencies when and if an expanded exploration program is initiated. Expanded exploration is interpreted to mean a significant number of additional wells and related activity as well as a commitment to a continuous and long term exploration program.

SOCIO-ECONOMIC EFFECTS  
OF ROUTINE OPERATIONS

RECOMMENDATION:

- (42) The Panel recommends that a public information and education program be initiated immediately through consultation with area residents, industry and the regulatory authority.

RESPONSE:

ACCEPT

COMMENT:

Such a program will be developed by the petroleum regulator. The Department of Indian and Northern Affairs and the Ministry of Intergovernmental Relations will be contacted regarding consultation with native communities and organizations.

SOCIO-ECONOMIC EFFECTS  
OF ROUTINE OPERATIONS

RECOMMENDATION:

- (43) The Panel recommends that, as a condition of obtaining an Exploration Agreement, an operator establish a preferential hiring policy for employing local residents assuming equivalent skills, and that the operator ensure contractors follow the same policy.

RESPONSE:

ACCEPT INTENT

COMMENT:

The operator will give first consideration to qualified residents before hiring anyone from another region. Consistent with the Canadian Charter of Rights and Freedoms, the operator will promote fairness in employment opportunities and avoid employment practices which result in employment barriers. This could include employment initiatives aimed at specific groups, consistent with Section 15 of the Charter.

SOCIO-ECONOMIC EFFECTS  
OF ROUTINE OPERATIONS

RECOMMENDATION:

- (44) The Panel recommends that government and industry review existing training programs, and if exploration activity is expanded, implement training to enable local residents to qualify for offshore petroleum-related jobs.

RESPONSE:

ACCEPT INTENT

COMMENT:

Expanded exploration is interpreted to mean a significant number of additional wells and related activity as well as a commitment to a continuous and long term exploration program.

The operator will provide fair and equal training opportunities for local residents, consistent with the Canadian Charter of Rights and Freedoms, at a level appropriate to the degree of planned activity. Government and industry will assess training opportunities in respect to planned activity to determine which opportunities could be made available to specific groups under expanded exploration.



SOCIO-ECONOMIC EFFECTS  
OF ROUTINE OPERATIONS

RECOMMENDATION:

- (45) The Panel recommends that industry, in an expanded exploration program, develop programs in consultation with area residents that would enable them to pursue, as far as possible, traditional activities while employed in offshore exploration.

RESPONSE:

ACCEPT

COMMENT:

This is consistent with petroleum industry practice.

SOCIO-ECONOMIC EFFECTS  
OF ROUTINE OPERATIONS

RECOMMENDATION:

- (46) The Panel recommends that, as a condition of obtaining an Exploration Agreement, an operator establish policies giving preference to local suppliers of goods and services, and that the operator ensure contractors follow the same policy.

RESPONSE:

ACCEPT INTENT

COMMENT:

Operators and contractors will provide a full and fair opportunity for local, provincial/territorial and national firms to participate on a competitive basis with respect to price, quality and delivery, in the supply of goods and services for proposed activities. Where such firms are competitive, first consideration will be accorded to local suppliers.

## HYDROCARBON BLOWOUTS

### RECOMMENDATION:

- (47) The Panel recommends that the regulatory authority not approve the drilling of any exploratory well until the operator has proven that formal arrangements are in place to bring in a relief well drilling unit to a blowout site and begin drilling a relief well within 14 days of a decision to mobilize, regardless of inclement weather or other inhibiting factors. The arrangements to start mobilizing a relief well unit are to be put into action within 48 hours of the start of a blowout.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

Existing regulations require the operator to identify a relief rig as a part of the approvals process. The 48-hour criteria and two-week mobilization period will be used as guidance for decision making in the approvals process.

Other factors such as the type of drilling units available, expertise, location of relief drilling units, are included in assessing the operator's relief well drilling program during the drilling approval process. The operator's proposed relief well program will be comprehensively reviewed and any departure from regulatory requirements will require detailed justification.

## HYDROCARBON BLOWOUTS

### RECOMMENDATION:

- (48) The Panel recommends that, before exploratory drilling begins, the regulatory authority take steps to:
- directly assess the experience, training, testing, and supervisory capabilities of drilling personnel;
- (49) ensure that best quality equipment, meeting the toughest standards of design, is used in all drilling and well-control operations;
- (50) develop effective surveillance, inspection and enforcement programs and practices related to well control, and ensure that these programs and practices are carried out in a thorough and timely manner; and

### RESPONSE:

ACCEPT

### COMMENT:

These recommendations parallel existing policies and regulations.

## HYDROCARBON BLOWOUTS

### RECOMMENDATION:

- (51) ensure that programs include frequent, unannounced inspections and exercises to ensure that appropriate drilling procedures, standards, and regulations are being met, and to verify that drilling personnel and equipment are prepared for responding to drilling emergencies and blowouts.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

Unannounced inspections or exercises of drilling personnel or equipment while on the rig, or safety exercises, are customarily carried out at the discretion of the petroleum regulator or an enforcement agency.

THE FATE AND EFFECTS OF OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (52) The Panel recommends that the Department of Fisheries and Oceans conduct research to determine the lethal and sublethal effects of naturally and artificially dispersed crude oil on critical life stages of migrating salmonid species.
- (53) The Panel recommends that the Department of Fisheries and Oceans, in cooperation with other agencies, develop a comprehensive research program designed to reduce data gaps necessary to develop a credible model of the impact of an oil blowout on important fish species at their various life stages.

RESPONSE:

ACCEPT INTENT

COMMENT:

Ongoing Department of Fisheries and Oceans research programs, as well as those of other research establishments, nationally and internationally, are assessing the lethal and sublethal impacts of hydrocarbons on fish, including salmonids, and fish habitat. This includes the toxicological effects of various hydrocarbons on fish, the assessment of fish stocks and populations, including salmonids, as part of ongoing management programs, and impact modelling exercises. This research addresses many current data deficiencies with respect to predicting potential consequences of an oil blowout on the West Coast. The need for and participation of governments in additional research on the impacts of oil on West Coast fisheries resources including important groundfish species and herring will be considered further following assessment of this research.

Any additional or accelerated research which may be considered, for example to refine impact predictions and post-spill assessments for compensation purposes, would be a joint government and industry responsibility. The Department of Fisheries and Oceans is presently reviewing its national research priorities related to hydrocarbon pollution and will be preparing a departmental strategy in this regard.



THE FATE AND EFFECTS OF OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (54) The Panel recommends that, in the event of a blowout, the Department of Fisheries and Oceans be prepared to immediately initiate a major research and monitoring program to gather information on the actual concentrations of dispersed oil in the water column and the lethal and sublethal effects on important West Coast species, particularly salmon and herring, at critical life stages, in order to assess more accurately the effects of oil on these species.

RESPONSE:

ACCEPT INTENT

COMMENT:

The petroleum regulator requires petroleum operators to conduct a monitoring program to assess the impact of dispersed and non-dispersed oil on marine, nearshore, and shoreline communities. Guidelines for such programs are under development, and the actual conduct of the survey will benefit from counsel provided by the interdepartmental emergency response team assembled as part of the government's contingency plan. While this monitoring program does not preclude ongoing research by the Department of Fisheries and Oceans and other agencies, it will provide information necessary for cleanup and compensation programs.

In the event of a major oil spill, opportunistic research may be conducted to assess fisheries-related impacts.

THE FATE AND EFFECTS OF OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (55) The Panel recommends that, before exploratory drilling begins, Environment Canada (Canadian Wildlife Service), assisted by appropriate provincial agencies, undertake inventory surveys of the coastline of the region as well as adjacent shelf waters, to establish baseline information on the population, location and behaviour of coastal bird species for contingency planning purposes.

RESPONSE:

ACCEPT

COMMENT:

Appropriate seabird baseline data will continue to be collected by government to effect sound oil spill contingency planning. The Canadian Wildlife Service is nearing the completion of its baseline inventory of seabird colonies and has initiated studies of inshore concentrations of marine birds in cooperation with the British Columbia Ministry of Environment and Parks. Seasonal distribution of pelagic birds will be provided on a site-specific basis by the proponent, as part of the approvals process.

THE FATE AND EFFECTS OF OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (56) The Panel recommends that the operator, as part of its oil blowout contingency plan, identify experts on bird cleaning who will be available on call to direct local efforts to clean oiled birds.

RESPONSE:

ACCEPT

COMMENT:

This recommendation is consistent with current practice.

THE FATE AND EFFECTS ON OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (57) The Panel recommends that programs be undertaken to improve the quality and quantity of information related to native food fisheries in the region.

RESPONSE:

ACCEPT

COMMENT:

It is recognized that the data base related to the dependency of native people on marine resources is weak. Extensive research and involvement of native communities to meet acceptable information needs is required. The Department of Fisheries and Oceans has indicated a willingness to provide assistance with the acquisition of information related to native food fisheries in the region.

THE FATE AND EFFECTS ON OIL  
IN THE MARINE ENVIRONMENT

RECOMMENDATION:

- (58) The Panel recommends that, before exploratory drilling begins, the Department of Fisheries and Oceans develop a contingency plan for managing the commercial fishery after a blowout, including monitoring of fish for tainting and administration of closures.

RESPONSE:

ACCEPT INTENT

COMMENT:

As part of its responsibilities, the Department of Fisheries and Oceans will develop appropriate fisheries resource contingency plans which would include components on monitoring requirements, the management of the commercial, native and recreational fisheries and administration of fishing closures.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (59) The Panel recommends that, before exploratory drilling is approved, the regulatory authority ensure that:

coastal sensitivity mapping begun under the Environmental Studies Revolving Fund is expanded to cover areas that are inadequately mapped;

RESPONSE:

ACCEPT INTENT

COMMENT:

Coastal resource mapping and sensitivity mapping are valuable tools for many users and government in general. Collection and interpretation of coastal information required for contingency planning on a regional scale will continue to be a responsibility of government. The Department of Fisheries and Oceans, in cooperation with the Department of Environment and the Ministry of Environment and Parks, is presently determining user needs and the most appropriate system for cataloguing and presenting information. Expansion of current resource mapping work to the British Columbia mainland coast will be contingent upon interagency review. Mapping and sensitivity analysis associated with a specific drilling program will continue to be the responsibility of the operator.



OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (60) The Panel recommends that, before exploratory drilling is approved, the regulatory authority assure that:

the native food fishery and resource harvesting activity are included within this mapping, with native people involved in acquiring and developing this information.

RESPONSE:

ACCEPT

COMMENT:

The inclusion of native food fishing and resource harvesting in any broad based regional study by government is accepted. If these data are accessible, this would similarly be a requirement of the operator in the preparation of site specific data for contingency planning.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (61) The Panel recommends that, before exploratory drilling is approved, the regulatory authority assure that:

arrangements are in place to ensure that sensitivity mapping is maintained and updated jointly by the British Columbia Ministry of Environment, Environment Canada, the Department of Fisheries and Oceans and industry.

RESPONSE:

ACCEPT

COMMENT:

The appropriate government agencies and the public are encouraged to continue to participate in obtaining and updating baseline data for the purpose of general resource management requirements as soon as possible. Currently, the Department of Fisheries and Oceans and the British Columbia Ministry of Environment and Parks are designing programs to meet their current and future resource data management requirements. Coastal sensitivity mapping would form part of these programs.

For the purpose of exploratory drilling operations, the operator would be required under existing regulations to develop a sensitivity analysis from this baseline data on a site specific basis for each well drilled.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (62) The Panel recommends that, before exploratory drilling is approved, the regulatory authority assure that:

the Heritage Conservation Branch of the Government of British Columbia complete an inventory of archaeological and cultural sites vulnerable to oil and ensure that measures to protect these sites from inappropriate cleanup procedures are included in contingency plans.

RESPONSE:

ACCEPT INTENT

COMMENT:

A broad inventory search as suggested by this recommendation is beyond the capability of the Heritage Conservation Branch and is contrary to Branch policy regarding industry related impacts concerning heritage sites. However, the normal referral system will enable the Branch to identify specific sites or areas considered to be at risk from a particular drilling program. The identification of sites must also involve input from native people regarding those sites of significance to their cultural heritage. Such sites will be given full consideration in contingency planning.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

(63) The Panel recommends that, in event of a blowout:

the Canadian Coast Guard coordinate government involvement in response to an oil spill resulting from a blowout:

RESPONSE:

REJECT

COMMENT:

In the event of a blowout, government will coordinate a response as necessary. However, this recommendation is misdirected and is not consistent with current legislation. The petroleum regulator is legislated to undertake the responsibility to coordinate response to an oil spill resulting from a blowout both concerning the well site and the environmental consequences.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (64) The Canada Oil and Gas Lands Administration and the British Columbia Ministry of Energy, Mines and Petroleum Resources coordinate government responsibilities for rig-related actions to control blowouts.

RESPONSE:

ACCEPT

COMMENT:

This recommendation is in keeping with existing regulations and guidelines for contingency planning.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (65) The Panel recommends that the regulatory authority ensure the establishment of programs to train, organize and equip local residents for participation in oil spill countermeasures and cleanup.

RESPONSE:

ACCEPT INTENT

COMMENT:

The petroleum regulator will assure that the role of local residents in oil spill cleanup programs is addressed by the operator in the preparation of contingency plans as appropriate.



OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (66) The Panel recommends that, before exploratory drilling is approved, the regulatory authority ensure that arrangements are in place to regularly test and evaluate operator and government contingency plans.

RESPONSE:

ACCEPT

COMMENT:

This recommendation is consistent with existing regulations and guidelines.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (67) The Panel recommends that the regulatory authority ensure that at least one full scale oil blowout response practice exercise is carried out during the initial exploration period, and if an extended exploration program takes place, that at least one exercise is carried out each year.

RESPONSE:

ACCEPT

COMMENT:

These recommendations are consistent with existing regulations and guidelines.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (68) The Panel recommends that, before exploratory drilling is approved, the regulatory authority require operators to provide detailed descriptions of:
- the monitoring and surveillance procedures and equipment that would be used to monitor the location of slicks from a blowout;
- (69) the location and availability of equipment and how it would be deployed; and
- (70) The adequacy of these procedures and equipment for use in tracking slicks from a blowout at the specific drilling site.

RESPONSE:

ACCEPT

COMMENT:

These recommendations are consistent with existing regulations and guidelines which are specially designed to protect sensitive shoreline areas, fisheries resources, supporting habitat, and commercial, recreational and native fishing activities.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (71) The Panel recommends that at least one year before exploratory drilling begins, the Department of Fisheries and Oceans, in cooperation with industry, implement a surface current measuring program in the region of the drilling site, and that industry include surface current effects for the purpose of developing contingency plans.

RESPONSE:

ACCEPT INTENT

COMMENT:

Regional studies of this nature will be undertaken jointly as needed by government and industry. The petroleum regulator will ensure that sufficient surface current information is presented by the operator in support of an acceptable contingency plan before approval of a drilling program is given. The operator would be responsible for collecting site specific current information in keeping with existing guidelines.

The Energy, Mines and Resources Panel on Energy Research and Development is planning to provide funding to the Department of Fisheries and Oceans beginning in 1989 to conduct a five year project for a regional description of the surface currents and their driving mechanisms in northern British Columbia waters. The data produced from this program will contribute to knowledge of currents in the exploration area.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (72) The Panel recommends that during oil spill countermeasure operations, emphasis be placed on the use of radio-located tracking buoys as sensors to provide position updates for oil slick tracking.

RESPONSE:

ACCEPT

COMMENT:

This recommendation is consistent with established practices. Additional slick tracking hardware may be used as and where appropriate.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (73) The Panel recommends, that before exploratory drilling is approved, the Canadian Coast Guard upgrade its resources for responding effectively to offshore oil spills, including trained personnel, modern equipment, depots, communications systems, and the logistical capability to deploy these resources quickly.

RESPONSE:

ACCEPT INTENT

COMMENT:

While the intent to have sufficient equipment available is supported, the responsibility for oil spill response related to offshore exploration lies with the operator. Regulatory practice requires that an operator show evidence that it is self-sufficient for purposes of emergency response to oil spills before a drilling program is granted approval. The operator is required to provide the initial oil spill response. The petroleum regulator in cooperation with the Canadian Coast Guard, would become involved only if the operator failed to meet the emergency situation.



**OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES**

**RECOMMENDATION:**

- (74) The Panel recommends, before exploratory drilling begins that:

Environment Canada and the British Columbia Ministry of Environment clarify the circumstances under which their respective governments would permit or prohibit the use of dispersants, and in cooperation with industry, develop a strategy for the use of dispersants if these are not prohibited; and

- (75) operators incorporate this dispersant strategy into their contingency plans.

**RESPONSE:**

ACCEPT

**COMMENT:**

Environment Canada, in consultation with other government departments, will pursue these recommendations and review and amend present dispersant use guidelines, if appropriate, to reflect dispersant use strategies for the West Coast. Use of dispersants on a site specific basis would include consideration of environmental resources at risk and expected dispersant effectiveness. Operators will be required to address the possible use of dispersants in their oil spill contingency plan proposals.

OIL BLOWOUT CONTINGENCY  
PLANNING AND COUNTERMEASURES

RECOMMENDATION:

- (76) The Panel recommends that, before exploratory drilling is approved, operators include specific strategies in their contingency plans for cleaning up shorelines that are vulnerable to oil from a blowout at the proposed drilling site, including details on the types and availability of equipment that would be used, manpower requirements, training provisions, operational logistics and guidelines for cleaning up individual shoreline areas.

RESPONSE:

ACCEPT

COMMENTS:

This recommendation is consistent with existing regulatory requirements and guidelines. The petroleum regulator will ensure that the operator demonstrates a knowledge of the vulnerable shorelines present in the drilling area.

## COMPENSATION

### RECOMMENDATION:

- (77) The Panel recommends that a government compensation policy covering all stages in an exploration program be established before exploration activity begins, and that this policy be based upon the following basic principles:

Compensation is to be provided for situations involving loss of, or damage to, property and equipment.

Compensation is to be provided for situations involving loss of income.

Compensation is to be provided for situations involving loss of, or damage to, common property resources.

### RESPONSE:

ACCEPT

### COMMENT:

The recommendation, for the most part, is presently incorporated in the legislation that governs offshore petroleum exploration and development. For example, the oil companies are held directly responsible for any loss or damage resulting from an oil spill. This includes loss of income, future income, cleanup costs, and in the case of aboriginal peoples loss of hunting, fishing and gathering opportunities. Indeed, petroleum operators are required to provide the government with financial securities as a measure to ensure that compensation will be made with a minimum of delay and without having to resort to legal proceedings.

## COMPENSATION

### RECOMMENDATION:

- (78) Attributable and non-attributable damages and losses are to be covered.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

Existing legislation contains liability and compensation provisions for attributable damages caused by oil spills and sea floor debris. These provisions ensure that claim settlements for damages attributable to a particular operator's activities are made quickly and without the necessity for legal proceedings.

Since an oil company cannot be held liable for damages that are not attributed to it, a problem may arise where damages appear to be the result of offshore petroleum activity for which the responsible party is not apparent. To solve this problem the Offshore Operator's Division of the Canadian Petroleum Association developed the "Fishermens Compensation Policy for Non-attributable Damages" for the East Coast. A similar concept will be considered for the West Coast by industry in consultation with the fishing community. It will be the responsibility of the industry to keep the petroleum regulator informed of initiatives in this regard.

## COMPENSATION

### RECOMMENDATION:

- (79) The burden of proof in any dispute over compensation for damages or income loss is to rest with the oil companies rather than the claimant; the onus is to be on the companies to support their disclaimer "on the balance of probability".

### RESPONSE:

REJECT

### COMMENT:

Petroleum operators are statutorily liable without proof of fault or negligence, for oil spill and sea floor debris related damages up to an applicable limit set by the petroleum regulator at \$30 million. Claimants need only establish that they suffered oil spill or debris related damages to qualify for compensation, without the requirement to initiate legal proceedings. Accordingly, the remedy provided by existing regulation is in keeping with the objectives of this recommendation.

## COMPENSATION

### RECOMMENDATION:

- (80) As both the oil industry and government will share in benefits to be gained from the exploration program, both should share in the financial responsibility for any common property resource losses or damages incurred.

### RESPONSE:

REJECT

### COMMENTS:

The government represents the people in the administration of public resources for public benefit. Petroleum operators are statutorily liable for oil spill related actual damages up to an applicable limit without a requirement for plaintiffs to establish proof of fault or negligence. This limit is set at \$30 million. Furthermore, operators can be liable for oil spill damages beyond this limit to the extent that fault or negligence is attributed to them.



## COMPENSATION

### RECOMMENDATION:

- (81) Compensation programs relating to common property resource losses should emphasize replacement of the resource rather than financial compensation.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

Resource replacement will be carried out as and where appropriate pursuant to implementation of the Department of Fisheries and Oceans Policy for the Management of Fish Habitat. Decisions regarding financial compensation or resource replacement will be only two of several remedies considered in establishing restoration of the environment. The operator is responsible for restoration of the environment which has been damaged, where possible. It is the responsibility of the petroleum regulator to see that such restoration takes place satisfactorily in cooperation with other government agencies.

## COMPENSATION

### RECOMMENDATION:

- (82) The Panel recommends that any disputes arising out of compensation claims relating to routine operations that cannot be resolved between the two parties be referred to third party arbitration.

### RESPONSE:

ACCEPT

### COMMENT:

Guidelines currently in preparation for processing damage claims under existing legislation envisage disputes being reviewed by a panel consisting of representatives of the associations for the involved parties. The recommendation from this panel would then be referred to the appropriate Minister for implementation.

Disputes concerning non-attributable damage claims would be reviewed by a panel of experts made up of representatives of the appropriate fishing and petroleum associations (without government involvement).

In both cases the process constitutes third party arbitration a process endorsed by the fishing industry.

## COMPENSATION

### RECOMMENDATION:

- (83) The Panel recommends that a policy for compensating losses and damage resulting from significant oil well blowouts, following the basic principles set out by the Panel and containing the elements outlined by the Panel, be in place before any exploration drilling begins.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

As noted in response to specific recommendations regarding compensation, there is general agreement with the majority of those recommendations associated with compensation, most of which reflect existing practice. Compensation policies on the West Coast will be developed by the petroleum regulator as required on the basis of Canadian standards and the Canadian legal system, keeping in mind the recommendations put forth by the Panel.

## COMPENSATION

### RECOMMENDATION:

- (84) The Panel recommends that before any drilling begins, each operator be required to post a \$40 million bond or irrevocable letter of credit.

### RESPONSE:

ACCEPT INTENT

### COMMENT:

This recommendation reflects current practice in British Columbia and Canada and a similar arrangement will be developed by the petroleum regulator for West Coast operations.

Currently all petroleum operators are required to furnish proof of financial responsibility in respect to their liability. The amount of the security is based upon a study of the probable clean up costs for different areas, and is consistent with the requirements of other maritime nations. The security in respect of oil spill damages however, is but one part of the overall financial integrity of the operators risk management program, and the sum of all corporate financial arrangements may exceed the level recommended.

## COMPENSATION

### RECOMMENDATION:

- (85) The Panel recommends that government accept a financial liability of \$10 million towards any resource rehabilitation programs that are found necessary to replace resource lost from an oil well blowout.
- (86) The Panel recommends that the absolute financial liabilities to be borne by the operator and government for resource rehabilitation programs not exceed \$20 million to be borne equally by government and the operator.

### RESPONSE:

REJECT

### COMMENT:

Liability for oil spill damage is the responsibility of the operator. The public as represented by government should not bear the cost of financial liability beyond its normal responsibilities.

## COMPENSATION

### RECOMMENDATION:

- (87) The Panel recommends that in the event of a blowout, the need for resource rehabilitation programs be determined by government, and that these programs be designed and implemented by the appropriate government agencies.

### RESPONSE:

ACCEPT

### COMMENT:

The petroleum regulator, in consultation with other federal and provincial government agencies, would in the normal course of events require the operator to undertake restoration programs for environmental damage resulting from a blowout.



RECOMMENDATION:

- (88) The Panel recommends that a West Coast Offshore Compensation Board be appointed if and when a significant oil well blowout occurs.
- (89) The Panel recommends that the West Coast Offshore Compensation Board consist of at least three members, include equal representation from the oil industry and the fishing industry, and be headed by an independent Chairman.

REPOSE:

ACCEPT INTENT

COMMENT:

While supporting the intent of this recommendation, it would be preferable that such a mechanism be established to serve as a forum for dispute resolution throughout the exploration phase, rather than as an ad hoc instrument to deal with an emergency situation. The detailed structure of such a board will be included in management discussions between the federal and provincial governments.

RECOMMENDATION:

- (90) The Panel recommends that a West Coast Offshore Petroleum Environment Coordinating Committee be established immediately to ensure that the Panel's recommendations relevant to the early stages of offshore hydrocarbon activity are implemented.

The Panel recommends that the West Coast Offshore Petroleum Environmental Coordinating Committee be created under authority of the federal and British Columbia Ministers of Environment and include representation from the British Columbia Ministry of Environment, Environment Canada (Pacific and Yukon Region), the British Columbia Ministry of Municipal Development (British Columbia Region), the Canada Oil and Gas Lands Administration and the British Columbia Ministry of Energy, Mines and Petroleum Resources. It should report to the two Ministers of Environment on a semi-annual basis at the threshold points through the early stages of exploration activity.

RESPONSE:

ACCEPT INTENT

COMMENT:

It will be necessary for a management structure to be put in place prior to the start of exploratory activity on the West Coast. As a first step, an Environmental Coordinating Committee will be established by the Canada Oil and Gas Lands Administration and the British Columbia Ministry of Energy, Mines, and Petroleum Resources, to begin the follow up to the Panel's recommendations. Detailed mechanisms for management and public consultation will be developed following a resolution of ongoing negotiations on management of the West Coast offshore.

MANAGING FOR ENVIRONMENTAL  
PROTECTION

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RECOMMENDATION:

- (91) The Panel recommends that a three-person Public Advisory Committee be appointed by the federal and British Columbia Ministers of Environment. This Committee will be charged with advising the regulatory authority and the Environmental Coordinating Committee about public concerns and with undertaking public information and education programs. Representation on this Committee should include local, native and fishing interests.

RESPONSE:

ACCEPT INTENT

COMMENT:

The concept of a mechanism for public consultation is accepted. This will be developed following ongoing discussions on management of offshore oil and gas activities on the West Coast offshore.

MANAGING FOR ENVIRONMENTAL  
PROTECTION

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RECOMMENDATION:

- (92) The Panel recommends that a West Coast Offshore Petroleum Environmental Management Authority be appointed and assume its duties at such time as the first proposal for exploratory drilling is received by the regulatory authority.

The Panel recommends that the membership of the Management Authority shall comprise five representatives of the regional public appointed jointly by the Ministers of Environment for Canada and British Columbia upon nomination by the Offshore Alliance of Aboriginal Nations, the north coast grouping of the Union of British Columbia Municipalities, the British Columbia Ministry of Environment, Environment Canada and the Department of Fisheries and Oceans.

RESPONSE:

REJECT

COMMENT:

This recommendation would establish an additional level of appointed authority to intercede between environmental agencies and the petroleum regulator. The intent of this recommendation may be addressed in structures established in forthcoming negotiations on management of oil and gas activity on the West Coast offshore.





